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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,913	03/12/2004	Donald G. Newberg	CM06187H	8294

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EXAMINER

RYMAN, DANIEL J

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/799,913

Applicant(s)

NEWBERG ET AL.

Examiner

Daniel J. Ryman

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 9, 10 and 13-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 and 10 is/are allowed.
- 6) ☒ Claim(s) 9 and 13-24 is/are rejected.
- 7) ☒ Claim(s) 1, 13, 15-17 and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Examiner acknowledges Applicant's filing of an RCE on 30 March 2006.
2. Applicant's arguments with respect to claims 9 and 13-24 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claims 1, 13, 17, and 24 are objected to because of the following informalities: in lines 1-2 of each claim, the phrase "an air interface comprising a plurality of bursts, a method" should be "an air interface, a method". An "interface" is a structure through which signals pass while "bursts" are signals. Therefore, an "interface" cannot comprise "bursts". While Examiner suggests eliminating the "comprising a plurality of bursts" language from the claim, the claims could also be amended to recite "an air interface through which signals comprising a plurality of bursts pass, a method". Appropriate correction is required.
4. Claim 15 is objected to because of the following informalities: the limitation found in lines 2-3 of the claim seems redundant in view of the limitations of claim 13, which claim 15 depends upon. Examiner suggests changing "The method of claim 13 further comprising the steps of: receiving a burst comprising payload and a synchronization field, wherein the synchronization field comprises a synchronization pattern" to "The method of claim 13, wherein receiving a burst comprising payload and a synchronization field further comprises the steps of:". Appropriate correction is required.

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5. Claim 16 is objected to because of the following informalities: "the operating mode is the expectation" should be "the operating mode is based on the expectation". Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 9 and 13-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 9 recites the limitation "the link control signaling" in line 1. There is insufficient antecedent basis for this limitation in the claim. Although neither claim 9 nor claim 1, which claim 9 depends upon, recites the limitation "link control signaling," Examiner notes that claims 3 and 4 do recite this limitation. As such, Examiner suggests making claim 9 depend from either claims 3 or 4.

9. The term "substantially similar" in claims 13, 15, 17, and 22 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

10. Claim 15 requires selecting a single synchronization pattern ("selecting a target synchronization pattern"); comparing the received pattern against this selected pattern, and, if the patterns match, processing the packet according to the selected pattern; otherwise, discarding the burst. Claim 13, which claim 15 depends upon, requires "comparing the received

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synchronization pattern against a first known synchronization pattern *and* a second known synchronization pattern” (emphasis added) and then processing the payload according to which known pattern matches the received pattern. Thus, claim 15 directly contradicts claim 13.

Simply, in claim 13, the received pattern is compared against two known patterns whereas in claim 15 the received pattern is compared against only a single known pattern and the signal is dropped if no match is made with this single pattern. Examiner is unsure how claim 15 and claim 13 can be reconciled. Therefore, Examiner suggests amending claim 15 to be an independent claim by taking the “receiving,” “determining,” and “identifying” steps from claim 13 (and any other non-conflicting limitations from claim 13) and adding them to claim 15. In addition, Examiner notes that this proposed amendment would render the objection to claim 15, seen above, moot.

11. Claim 18 recites the protocol ANSI.102.BAAA. The use of a protocol in a claim renders the claim indefinite because the protocol can change over time. Because a protocol can change over time, any claims containing a protocol can also change over time thus rendering the claim indefinite. This indefiniteness can be overcome by specifically limiting the protocol cited in the claims to particular protocol at a point in time, such as ANSI.102.BAAA(1999).

12. Claim 23 requires that if the indicator of the signaling field is not one of (a), (b), or (c), then it identifies a second type of information. However, claim 1, which claim 23 depends upon, requires that “an indicator . . . is one of [(a), (b), and (c)].” Thus, claim 1 limits the indicator to *only* (a), (b), or (c) while claim 23 adds an additional possibility – it identifies a second type of information. The only suggestions that Examiner has is to either amend claim 1 to include the

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limitations of claim 23 or to delete claim 23 where Examiner notes that claim 24 covers the limitations of claim 23.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (USPN 6,714,557) in view of Oliver (USPN 6,292,484) in further view of Cantoni et al. (USPN RE37,494).

15. Regarding claim 24, Smith discloses in a wireless communication system with an air interface comprising a plurality of bursts (col. 1, lines 31-33), a method comprising the step of defining a plurality of bursts, wherein each burst (time slot) comprises a field (overhead) embedded within the burst (col. 2, lines 52-col. 3, line 13); and wherein the field is one taken from the group of a synchronization field (preamble) and a signaling field (other fields in overhead) (col. 2, lines 52-col. 3, line 13) wherein the claim only requires that each burst have at least one field and that this one field be a synchronization field or a signaling field such that the "field" in one burst need only be a preamble *or* a signaling field; and wherein, when the field is a synchronization field, defining a position of at least one subsequent burst comprising the signaling field (col. 5, lines 16-21);

Smith does not expressly disclose that, when the field is a synchronization field, defining a position of at least one subsequent burst comprising the synchronization field; however, Smith

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does disclose that the synchronization field can be eliminated for a predetermined number of slots (col. 4, line 48-col. 5, line 7). Oliver teaches, in a TDMA communication system, using an offset to indicate the position of a subsequent embedded field (col. 3, lines 40-62) in order to allow the receiver to correctly ascertain the positions of fields in the data stream (col. 4, lines 22-30). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to define a position of at least one subsequent burst comprising the synchronization field in order to allow the receiver to correctly ascertain the position of the synchronization field when the synchronization field has been eliminated for a predetermined number of slots.

Smith in view of Oliver does not expressly disclose that, when the field is a signaling field, defining an indicator in a framing portion of the signaling field to identify that payload in the burst is taken from a group of (a) begins a new packet, (b) completes a packet, and (c) does not begin or complete a packet. Cantoni discloses, in a TDMA communication system, defining an indicator to identify that payload in the burst is taken from a group of (a) begins a new packet, (b) completes a packet, or (c) does not begin or complete a packet (col. 3, lines 65-66 and col. 4, line 59-col. 5, line 9) in order to allow a packet that is larger than the size of the time slot to be transmitted and correctly received (col. 1, lines 53-60 and col. 2, lines 40-50). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to define, when the field is a signaling field, an indicator in a framing portion of the signaling field to identify that payload in the burst is taken from a group of (a) begins a new packet, (b) completes a packet, and (c) does not begin or complete a packet in order to allow a packet that is larger than the size of the time slot to be transmitted and correctly received, where the information is "framing information" such that it is in a "framing portion of the signaling field."

Allowable Subject Matter

16. Claims 1-5 and 10 are allowed. The prior art does not disclose or fairly suggest having the field be a synchronization field in a first burst in a superframe and the field be a signaling field in the remaining bursts in the superframe.

17. Claims 9 and 23 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. The prior art does not disclose or fairly suggest having the field be a synchronization field in a first burst in a superframe and the field be a signaling field in the remaining bursts in the superframe.

18. Claims 13-22 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. The prior art does not disclose or fairly suggest signaling a mode for the system using a unique synchronization pattern.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

0512 Daniel J. Ryman
Examiner
Art Unit 2616



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